

## ABTRACT OF THE DISCLOSURE

In a semiconductor temperature detecting circuit using semiconductor temperature sensors each comprising bipolar transistors connected in Darlington connection, to provide a semiconductor temperature detecting circuit capable of automatically compensating for a dispersion in fabrication of reference voltage for comparing outputs of temperature sensors, the semiconductor temperature detecting circuit includes a first and a second semiconductor temperature sensor each having bipolar transistors connected in Darlington connection, the steps of for supplying different constant currents ( $I$  and  $n \times I$ ) to the first and the second semiconductor temperature sensors and detecting temperature based on a corresponding relationship (Fig. 2) between a ratio of output voltages of the first and the second semiconductor temperature sensors and the temperature.